

***Proposed Revision to Wisconsin's State Implementation Plan  
For Achieving the National 1-Hour Ozone Ambient Air Quality  
Standard***

**Amended Request to Redesignate to Attainment Two Wisconsin Counties  
comprising Two Areas Designated Nonattainment for Ozone**  
*(Manitowoc and Door Counties)*

and

**Proposed Updates to Maintenance Plans for Two Counties**  
*(Sheboygan and Kewaunee Counties)*

**Proposed Transportation Conformity Budget Updates for 10 Counties  
addressing Five Ozone Areas**  
*(Sheboygan, Manitowoc, Kewaunee, Door; plus, the SE WI 6 county area – Kenosha, Milwaukee  
Ozaukee, Racine, Washington, Waukesha)*

and

**SIP Milestone/Maintenance Inventories for 1999 for 10 Counties addressing  
Five Ozone Areas**  
*(Sheboygan, Manitowoc, Kewaunee, Door; plus, the SE WI 6 county area – Kenosha, Milwaukee  
Ozaukee, Racine, Washington, Waukesha)*

Wisconsin DNR

Bureau of Air Management

October 11, 2002

***Review Draft Document***

*Intentionally Blank*

## ***Executive Summary – Wisconsin Ozone Redesignation Proposal – 2002***

### ***The Manitowoc County and Door County Wisconsin Ozone Nonattainment Areas***

Two counties in northeastern Wisconsin formally designated nonattainment are now monitoring attainment of the 1-hour ozone national ambient air quality standard. This occurred at the close of the 2001 summer ozone season and has continued throughout the 2002 season. As a consequence, Wisconsin is pursuing a request to the U.S. Environmental Protection Agency (EPA) to formally redesignate the two areas – Manitowoc and Door - to attainment for the 1-hour standard.

A broader redesignation request including all the ozone areas in the Lake Michigan region (the related ozone areas in WI, IL, IN) had been announced and was being developed by the three states until an extended June, 2002 ozone episode returned many of the areas in the region to violation status.

The attainment level air quality for the northern counties comes as a result of twenty years of control effort from all sectors to limit and reduce the emissions of pollutants that cause ambient ozone – volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) – across the Lake Michigan Region. Early effort focused on VOC control and the more recent efforts are focusing on strong NO<sub>x</sub> reductions through the modeled attainment date (2007).

Attainment is indicated when the number and intensity of peak ozone concentration periods has dropped sufficiently to meet the levels of the standard. Redesignation can be approved by EPA once the attainment level air quality is certified and the state can show that it has adopted and implemented all required emission control programs developed as part of its approved attainment demonstration plan for 2007. To maintain attainment air quality into the future for the areas, Wisconsin has worked with Illinois and Indiana to ensure continued progress in the active ozone control plans through 2007 and to establish a cooperative regional evaluation to determine any needed response for violation level air quality that might recur during the 10-year maintenance period set for the redesignated counties.

The proposal package contains the technical justification for the redesignation based on air quality improvement and emissions reductions associated with the ozone control plans. The proposal also updates the standing attainment maintenance plans for two former eastern Wisconsin nonattainment areas (Sheboygan and Kewaunee counties).

Upon EPA approval, Wisconsin will change the new source permitting requirements for major VOC emission sources to reflect attainment status control technology targets and to eliminate the VOC offset requirement in the two counties.

The maintenance plans will establish revised transportation conformity budgets for NO<sub>x</sub> and VOC, for the five areas comprising the 10 eastern Wisconsin counties affected by the regional plan. The plans set new numbers for 2012, update the 2007 budgets and delete the interim progress-based 2002 and 2005 budgets for the northern counties.

The inventory development and **support** work supporting the earlier expansive redesignation proposal and the current more limited request have allowed the program

to document its formal 1999 SIP Milestone (*aka – periodic*) Inventory for the ozone areas for VOC and NO<sub>x</sub>. This package contains that required inventory in addition to the maintenance inventories (1990, 2007 and 2012) and the new conformity budgets (2007 for the continuing nonattainment areas and 2007/2012 for the maintenance areas).

Wisconsin DNR has worked with stakeholders during the redesignation proposal development period to address formal planning requirements, concerns regarding the process and formal commitment to a contingent regional response for renewed 1-hour ozone air quality violation and to clarify the comprehensive air quality status of the area. Comment received during the initial, broader area redesignation hearing suggested that a follow-up hearing would be necessary to address any major changes to the proposal. This document addresses those changes and reflects the less sweeping nature of the proposed regional maintenance plan.

While this 1-hour standard redesignation will be a critical milestone, the areas addressed in this proposed revision all continue to show elevated 8-hour ozone concentrations that will likely result in future designation for some or all of the areas to nonattainment for the 8-hour ozone standard.

## **Revised Redesignation and Maintenance Plan Proposal**

### **Oct 2002**

#### **Executive Summary**

#### **Table of Contents**

#### **1. Introduction**

#### **2. Redesignation Package Components**

#### **3. Achieving Attainment Air Quality**

Introduction – Monitoring Attainment Air Quality

Regional Ozone Air Quality Improvement leading to Attainment

#### **4. Establishing the Basis for Air Quality Improvement leading to Ozone Standard Attainment**

Introduction – Permanent Air Quality Improvement

Redesignation Inventories Overview

Fully-Approved WI Ozone Control SIP

Real and Permanent Regional Air Quality Improvement

Regional Emissions Trend

***Synopsis of the 1999 SIP Milestone Inventory***

*New*

#### **5. Maintaining 1-Hr Ozone Attainment into the Future**

Introduction to the Maintenance Plan

Projecting 2007 and 2012 AQ Maintenance Consistent with the “2000 Attainment Demonstration for the Year 2007”

Continued Ambient Air Quality Management Programs in Wisconsin and the Lake Michigan Region

A Regional Approach to Air Quality Maintenance

Discussion of the Potential Contingent Emission Control Measures

#### **6. Proposed Transportation Conformity Budgets (MOBILE6 basis) SIP Revision**

*New*

#### **7. Public Outreach and Hearing Process for Redesignation, Regional Maintenance Plan Development and Future Ozone Air Management**

Stakeholder Outreach on the Redesignation Effort – Background

Clean Air (Ozone) Redesignation – Process Initiation Meeting & Key Messages

Supplemental Information on the Redesignation Process and Implications

General Air Quality Information and Outreach

Public Outreach regarding the Contingency Measures & Regional Plan

Public Hearing on the Redesignation Request, the Maintenance Plan, Conformity Budget

Updates and the 1999 Milestone Inventory

#### **Technical Appendices**

#### **Listing of Technical Appendices to the Amended Redesignation Request**

*Appendix 3-1 AQ Data and Ozone Trends in the Lake Michigan Area (available from LADCO & DNR)*

*Appendix 4-1 Redesignation Inventories – Support Document*

*Appendix 4-2 A Real and Permanent Emissions Reduction Demonstration based on Federal, Regional and State/NAA Ozone SIP emission control programs*

*Appendix 4-3 Mobile Sector Inventory- Technical Modeling Documentation*

***Appendix 4-4 Support Document – 1999 SIP Milestone Inventory***

*Appendix 5-2 Reconciliation of 2007 Attainment and Maintenance Inventories*

*2<sup>nd</sup> Public Hearing Notice – Amended Redesignation Package, MOBILE6 Conformity Budgets & 1999 Milestone Inventory (as yet unsigned)*

**Intentionally Blank**

## 1. Introduction

Since the late 1970s Wisconsin has been preparing and implementing various emission control plans to improve air quality in 10 southern and eastern counties which have experienced violations of the national ambient air quality standards (NAAQS) for ozone – a photochemical oxidant shown to adversely impact public health. The adoption of a more regional, multi-state approach to ozone evaluation and control efforts has resulted in the gradual improvement of the areas' air quality. This improvement accelerated after the latest formal designations of nonattainment status built into the Clean Air Act amendments of 1990 (CAA-90). Last year, in tandem with Illinois and Indiana, Wisconsin received full approval for a modeled regional demonstration and related emission control plan focused on achieving the ozone standard by 2007.

This document provides the technical justification for US-Environmental Protection Agency (US-EPA) to redesignate two of the current 8 nonattainment counties of eastern Wisconsin as attainment for the 1-hour ozone standard based on achieving monitored regional attainment during the years 1999, 2000 and 2001 (as well as through the 2002 season based on the “almost final” data subject to Q/A). The two formal nonattainment area(s) subject to redesignation include the Manitowoc County “Moderate” area and the Door County “Rural transport – Marginal” area.

The document also revises the standing attainment maintenance plans for two other former nonattainment areas along the Lake Michigan shoreline – Sheboygan and Kewaunee counties. This plan takes no action regarding the Walworth County maintenance area. In its amended form, the document notes amended transportation conformity budgets for the six-county SE WI (Milwaukee metro area) nonattainment area. Companion documents noticed for the hearing establish the MOBILE-6 modeling as the basis for the updated transportation conformity budgets for ten counties and document the 1999 SIP milestone (“periodic”) inventory for all the WI ozone areas except Walworth County.

Upon US-EPA approval of this request and its related State Implementation Plan (SIP) revisions for ozone air quality control, Wisconsin can formally change the new source review permitting and emissions offset requirements for VOC-emitting facilities in Manitowoc and Door counties. The changes will result in more consistent application of source size thresholds and emission control requirements for new facilities emitting volatile organic compounds (VOC) and nitrogen oxides (NOx) compared to the rest of the state.

Earlier in 2002, redesignation requests proposals had been developed for the combined northeastern Illinois (IL) and northwestern Indiana (IN) portions of the Chicago Consolidated Metropolitan Statistical Area (CMSA), for the Milwaukee/Racine CMSA and for the Kenosha portion of the Chicago CMSA – all within the Lake Michigan region. Those requests had to be withdrawn due to ozone violation status for the 1-hour standard re-occurring during June. Had violations not occurred this season, the region would have been the first group of *severe* ozone areas in the country to adopt full attainment demonstrations *and* to be redesignated as attainment. Though not now eligible for redesignation until at least 2005, the regional trend showing reductions in peak 1-hour concentrations reflects a major regional and national air quality milestone.

With the new source permitting exception noted above, the changed air quality status for the two northern areas will not alter the existing air emissions control program requirements contained in the state's Ozone SIP. Major state program elements such as the vehicle inspection and maintenance program, reasonably available control technology (RACT) requirements for existing VOC sources and the more recent NOx emissions limitations for certain stationary sources will all remain in effect for the duration of the current Maintenance Plan (2012). These are the local components of emission control programs that have resulted in the improved ambient air quality for southeastern Wisconsin since the areas' designation as nonattainment – most recently as part of the 1990 Clean Air Act amendments. In addition, the major federal emission control programs such as reformulated gasoline, new vehicle emission standards, new off-road engine emission standards and various national and regional control technology requirements for stationary sources including the NOx SIP and related Section 126 NOx control programs remain fully active for the Lake Michigan Ozone Region.

Finally, this submittal in no way addresses expected control programs for this Region associated with the new eight hour ozone standard or the new PM-2.5 standards. The relaxation of new source control technology requirements (for VOC sources in the two counties) and the elimination of the current VOC emissions offset requirements (in the two counties) might be reversed once areas are formally designated under the eight hour standards. These designations are expected to be proposed in 2003 or 2004 and finalized within a year of proposal. In addition, certain emission control requirements for as yet uncontrolled large sources of NOx and SO2 could be required under regional haze control programs being developed by US-EPA to meet visibility requirements of the Act, and, to further address the regional pollutant transport aspects of ozone and PM-2.5 plans for areas downwind of the Lake Michigan region.